OWNER'S MANUAL

Model Number

700527-2 Subframe with Winch
700528-1 Compact Drive Mechanism
700529-1 Northeast Drive Mechanism

BERCO

Subframe with Electric Lift & Drive Mechanism

for

CUB CADET LTX, SLTX & GTX

TORO 2010 LX & GT & 2010 MTD 900 SERIES

*** ASSEMBLY** *** REPAIR PARTS**

*** OPERATION** *** MAINTENANCE**

CAUTION:

READ & FOLLOW ALL SAFETY RULES & INSTRUCTIONS BEFORE OPERATING YOUR EQUIPMENT

LIMITED WARRANTY

Conditions and Products Covered:

BERCOMAC guarantees any part of the product or accessory manufactured by BERCOMAC and found in the reasonable judgment of BERCOMAC to be defective in material and or workmanship will be repaired or replaced by an authorized dealer without charge up to our maximum labor rates and pre-established times. For replacement parts only standard ground freight services are covered. This warranty extends to the original retail purchaser only and is not transferable to any subsequent purchasers.

Warranty Period

(from date of the original retail purchase)

- Residential use: 1 year
- Semi-commercial, professional or rental use: 90 days

Exceptions Noted Below; the following items are guaranteed by the original manufacturer and have their own warranty, conditions and limited time:

- Tire Chains: 90 days
- Engines: Will vary as per the manufacturer
  Please refer to the engine manufacturer's warranty statement included with the unit. BERCOMAC is not authorized to handle warranty adjustments on engines.

Items and Conditions NOT Covered:

This warranty does not cover the following:

- Pick-up or delivery charges or in-home services fees.
- Any damage or deterioration of the unit, parts and or finish of these due to normal use, wear and tear, or exposure.
- Cost of regular use or maintenance service or parts, such as gas, oil, lubricants, tune-up parts, and adjustments.
- Any part or accessory which has been altered, modified, misused, neglected, accidentally damaged or not properly installed, maintained, stored or repaired not in accordance with the instructions in the owner's manual.
- Repair due to normal wear and or any wear items such as shear pins, bolts, belts, etc.
- Expedited freight fee services for replacement parts.
- Shear bolts and shear pins are to be considered as a preventive measure not as an assured protection, any damages resulting from the lack of shear bolts breakage are not covered.

NOTE: All warranty work must be performed by an authorized dealer using original (manufacturer) replacement parts.

Owner's Responsibilities:

BERCOMAC's defective equipment or part must be returned to an authorized dealer within the warranty period for repairs. In the event that defective merchandise must be returned to manufacturer for repairs, freight fees are prepaid and a written authorization from BERCOMAC must be obtained by dealer prior to the shipment. This warranty extends only to equipment operated under normal conditions. To validate a warranty claim, it is the user's responsibility to maintain and service the unit as specified in the owner's manual or to have the unit serviced at their dealer at their expense.

General Conditions:

The sole liability of BERCOMAC with respect to this warranty shall be strictly and exclusively repair and replacement as mentioned herein. BERCOMAC shall not have any liability for any other costs, loss or damage, including but not limited to, any incidental or consequential loss or damage.

In particular, without being limited to, BERCOMAC shall have no liability or responsibility for:

- Travel time, overtime, after hours time or other extraordinary repair charges or relating to repairs and or replacements outside of normal business hours.
- Rental of like or similar replacement equipment during the period of any, repair or replacement work.
- Any communicating or travel charges.
- Loss or damage to person or property other than that covered by the terms of this warranty.
- Any claims for lost revenue, lost profit or any similar costs as a result of damage or repair.
- Attorney's fees.

BERCOMAC's responsibility in respect to claims is limited to making the required repairs or replacement without charge up to our maximum labor rates and pre-established times and no claim of breach of warranty shall be cause for cancellation or rescission of the contract of sale of any product or accessory.

This warranty gives you specific legal rights. You may also have other rights, which vary from state to state.

NOTE: Bercomac reserves the right to change or improve the design of any part or accessory without assuming any obligation to modify any product previously manufactured.

Instructions for Obtaining Warranty Services:

Contact dealer where equipment was purchased or any other BERCO service dealer to arrange service at their dealership. To locate a dealer convenient to you, access our website at www.bercomac.com. Don't forget to bring your proof of purchase (sales receipt) to the BERCOMAC dealer.

Bercomac Limitée
92, Fortin North, Adstock, Quebec, Canada, G0N 1S0

TABLE OF CONTENTS

PAGE

INTRODUCTION 2

SAFETY PRECAUTIONS 3

SAFETY DECALS 5

ASSEMBLY
- Tools Required 6
- Step 1: Subframe Installation 6
- Step 2: Installation the Winch Control Switch 10
- Step 3: Drive Mechanism Installation 13

OPERATION & MAINTENANCE
- Controls 16
- Maintenance 16
- Belt Replacement 16
- Verify Tire Pressure 16

DISMOUNTING & STORAGE
- Dismounting 16
- Storage 16

TROUBLE SHOOTING 17

PARTS BREAKDOWN AND PARTS LIST
- Compact Drive Mechanism 700528-1 18
- Northeast Drive Mechanism 700529-1 20
- Subframe 700527-2 22
- Winch 106125 25

TORQUE SPECIFICATION TABLE 26

ATTACHMENTS 27

INTRODUCTION

TO THE PURCHASER

This new accessory was carefully designed to give years of dependable service. This manual has been provided to assist in the safe operation and servicing of your attachment.

NOTE: All photographs and illustrations in the manual may not necessarily depict the actual models or attachment, but are intended for reference only and are based on the latest product information available at the time of publication.

Familiarize yourself fully with the safety recommendations and operating procedures before putting the machine to use. Carefully read, understand and follow these recommendations and insist that they be followed by those who will use this attachment.

THIS SAFETY ALERT SYMBOL IDENTIFIES AN IMPORTANT SAFETY MESSAGE IN THIS MANUAL THAT HELPS YOU AND OTHERS AVOID PERSONAL INJURY OR EVEN DEATH. DANGER, WARNING, AND CAUTION ARE SIGNAL WORDS USED TO IDENTIFY THE LEVEL OF HAZARD. HOWEVER, REGARDLESS OF THE HAZARD, BE EXTREMELY CAREFUL.

DANGER: **Signals an extreme hazard that will cause serious injury or death if recommended precautions are not followed.**

WARNING: **Signals a hazard that may cause serious injury or death if the recommended precautions are not followed.**

CAUTION: **Signals a hazard that may cause minor or moderate injury if the recommended precautions are not followed.**

Record your attachment serial number and purchase date in the section reserved below (there is no serial number on the subframe). Your dealer requires this information to give you prompt, efficient service when ordering replacement parts. Use only genuine parts when replacements are required.

If warranty repairs are required please present this registration booklet and original sales invoice to your selling dealer for warranty service.

This manual should be kept for future reference.
Please check if you have received all the parts for your kit with the list of the bag and the list of the box.

SERIAL NUMBER : _____
(IF APPLICABLE)

MODEL NUMBER: _____

PURCHASE DATE : _____

SAFETY PRECAUTIONS

Careful operation is your best insurance against an accident. Read this section carefully before operating the vehicle and accessory. This accessory is capable of amputating hands and feet and throwing objects. Failure to observe the following safety instructions could result in serious injury. All operators, no matter how experienced they may be, should read this and other manuals related to the vehicle and accessory before operating. It is the owner's legal obligation to instruct all operators in safe operation of the accessory.

GLOSSARY:

In this manual, right and left sides are determined by sitting on the seat of the vehicle facing forward.

In this manual, "accessories" means attachments (snowblower, rotary broom, blade etc.) that you install on the vehicle (lawn tractors, A.T.V. s etc).

TRAINING:

This symbol, "Safety Alert Symbol", is used throughout this manual and on the accessory's safety labels to warn of the possibility of serious injury. Please take special care in reading and understanding the safety precautions before operating the vehicle and accessory.

1. Read this owner's manual carefully. Be thoroughly familiar with the controls and proper use of the vehicle and accessory. Know how to stop the unit and disengage the controls quickly.

2. Never allow children to operate the vehicle nor the accessory. Never allow adults to operate the vehicle nor the accessory without proper instructions.

3. No one should operate the vehicle nor the accessory while intoxicated or while taking medication that impairs the senses or reactions.

4. Keep the area of operation clear of all people, particularly small children and pets.

PREPARATION:

1. Thoroughly inspect the area where the accessory is to be used and remove door mats, all foreign objects and the like.

2. For motorized accessories, disengage all clutches and shift into neutral before starting engine.

3. Do not operate the accessory without wearing adequate winter outer garments. Avoid loose fitting clothing that can get caught in moving parts. Wear footwear that will improve footing on slippery surfaces.

4. Handle fuel with care, it is highly flammable.

   a) Use approved fuel container.
   b) Never add fuel to a running engine or hot engine.
   c) Fill fuel tank outdoors with extreme care. Never fill fuel tank indoors.
   d) Never fill containers inside a vehicle, or on a truck or a trailer bed with a plastic liner. Always place containers on the ground, away from your vehicle, before filling.
   e) When practical, remove gas-powered equipment from the truck or trailer and refuel it on the ground. If this is not possible, then refuel such equipment on a trailer with a portable container, rather than from a gasoline dispenser nozzle.
   f) Keep the nozzle in contact with the rim of the fuel tank or container opening at all times, until refueling is complete. Do not use a nozzle lock-open device.
   g) Replace fuel cap securely and wipe up spilled fuel.
   h) If fuel is spilled on clothing, change clothing immediately.

5. Never attempt to make any adjustments while the engine (motor) is running (except when specifically recommended by manufacturer).

6. Let the vehicle and accessory adjust to outdoor temperatures before using.

7. Never use an accessory without proper guards, plates, or other safety protective devices in place

8. Always make sure to wear the appropriate safety equipment required (glasses, muffs, mask…) for each type of product. See operation section.

9. Always make sure of having safe traction on the vehicle by using the recommended accessories (chains, A.T.V. tracks, counterweights…). See operation section.

10. Always make sure the all components are correctly installed. (driveline securely attached and locked at both ends, belts properly installed…)

11. Always handle the winch cable with thick leather gloves.

12. **Never modify the accessory or any part without the written consent from the manufacturer.**

SAFETY PRECAUTIONS

OPERATION:

1. Do not put hands or feet near, under or inside rotating parts.

2. Exercise extreme caution when operating on or crossing gravel drives, walks or roads. Stay alert for hidden hazards or traffic. Do not carry passengers.

3. After striking a foreign object, stop the engine (motor), disconnect the wire from the spark plug(s) and keep wire away to prevent accidental starting. Thoroughly inspect the accessory for any damage and repair damage before restarting and using the accessory.

4. If the unit should start to vibrate abnormally, stop the engine (motor) and check immediately for the cause. Vibration is generally a warning of trouble.

5. Take all possible precautions when leaving the vehicle unattended. Disengage the power take-off, lower the attachment, place the transmission into neutral, set the parking brake, stop the engine and remove the contact key.

6. Do not run the engine indoors, except when starting the engine and for transporting in or out of the building. Do not operate or let motor run in a storage area without ventilation because gas contains carbon monoxide which is odorless, colorless and can cause death.

7. Never use the accessories across the face of slopes, go from top to bottom. Exercise extreme caution when using equipment on slopes. Do not attempt to clear a steep slope.

8. Never tolerate bystanders in the working zone. Never use an accessory in the direction of bystanders, it might throw gravel or debris that can hurt people or damage property.

9. Never operate the accessory at high transport speeds on slippery surfaces. Use care when backing up.

10. Do not carry passengers.

11. Disengage power to the accessory when it is transported or not in use.

12. Never operate the accessory without good visibility or light.

13. Keep the accessory away from heat sources or flames.

14. Never handle the winch cable or hook while in tension.

MAINTENANCE AND STORAGE

1. When cleaning, repairing or inspecting the vehicle and accessory, make certain that all moving parts have stopped. For gasoline engine, disconnect wire from the spark plug(s) and keep wire away to prevent accidental starting.

2. Check all the bolts and components at frequent intervals to make sure that they are properly tightened.

3. Never store a motorized accessory with fuel in the fuel tank inside a building where ignition sources are present such as hot water and space heaters, clothes dryers, and the like. Allow the engine to cool before storing in any enclosure.

4. Always refer to the owner's manual when you store the accessory and vehicle for a prolonged or an unspecified length of time.

5. Maintain or replace safety and instruction labels, as necessary.

6 For winter accessories, (if applicable), let the engine run for a few minutes after clean snow in order to prevent the rotary parts from freezing.

7. Inspect the vehicle's and accessory's air filter (if applicable) every day. Clean it or replace it as necessary. Change the oil more often when working in dusty conditions. See the vehicle's and accessory's owner's manual.

THIS SYMBOL MEANS
DANGER !
BECOME ALERT !
YOUR SAFETY IS INVOLVED !

SAFETY DECALS

REPLACE IF DECALS ARE DAMAGED
SEE PARTS BREAKDOWN FOR DECAL LOCATION

DECAL #105133

Failure to observe these instructions could lead to severe injury or death.
To avoid injury to hands or fingers:
-Always keep hands clear of rope hook loop, ,hook and fairlead opening during installation , operation and when spooling in or out.
-Always use extreme caution when handling hook and rope during spooling operations.
-Always wear heavy leather gloves when handling rope.
-Keep hands away from the hot surface.

ASSEMBLY

IMPORTANT: TORQUE ALL BOLTS ACCORDING TO TORQUE SPECIFICATION TABLE WHEN STATED: TIGHTEN FIRMLY.

THE WINCH KIT IS TO BE USED ONLY TO LIFT BERCO ACCESSORIES, ANY OTHER USE MAY CAUSE DAMAGE TO THE VEHICLE.

This subframe may be used to install different attachments (see attachments page). Once installed, it may remain permanently on your vehicle.
NOTE: It is not necessary to remove mower deck at this step.

INSTALLING THE REFLECTORS

IMPORTANT: When operating the tractor with the front mounted attachment, install the two red-colored adhesive reflectors on the rear vertical surface of the tractor's fender.

TOOLS REQUIRED:

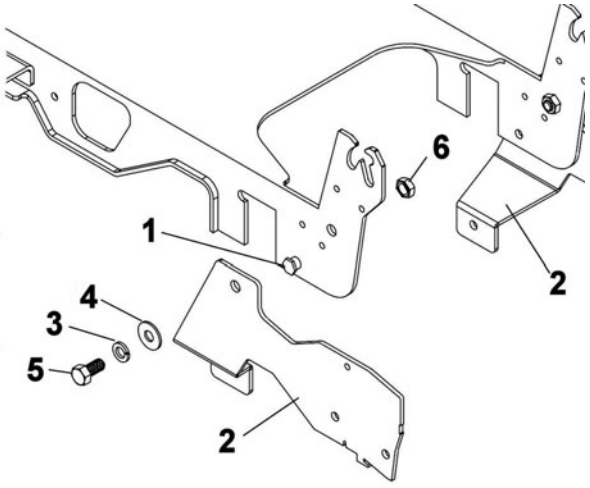
Wrenches:1/2, 3/4, 5/16, 7/16, 9/16, 10mm
Ratchet
Sockets: 2/16, 1/2, 9/16, 3/4, 10mm
Cutting pliers
Pliers
Square head screwdriver: #2, #3

Please sort out and identify all the hardware before starting installation. Lists for the hardware bag and for the box are supplied in each.

STEP 1
SUBFRAME INSTALLATION:

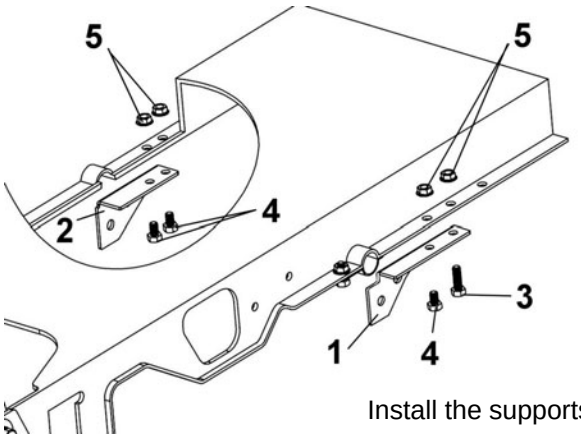
Refer to parts breakdown section for parts identification.

Install the left & right supports (item 2) on each side of the vehicle.		
Item #	Description	Action
1	Tractor shoulder screw	Remove from both sides of tractor.
2	Left & right support (qty 2)	Install on each side as shown.
3	Lock washer (qty 2)	Insert on the bolt (item 5) as shown.
4	Flat washer (qty 2)	Insert on the bolt (item 5) as shown.
5	Hex bolt 1/2'' x 1'' (qty 2)	Insert as shown.
6	Hex nut 1/2'' thin, (qty 2)	Do not tighten.
NOTE: Save the tractor shoulder bolts in case you reinstall the bumper.		



Install the supports

Install the left & right supports (items 1 & 2) on each side of the vehicle.		
Item #	Description	Action
1 & 2	Left & right support	Install as shown.
3	Hex bolt 5/16'' x 1''	Insert in supports as shown.
4	Hex bolt 5/16'' x 1/2'' (qty 3)	Insert in supports as shown.
5	Hex nut 5/16'' (qty 4)	Install on bolts and tighten firmly.



Install the supports

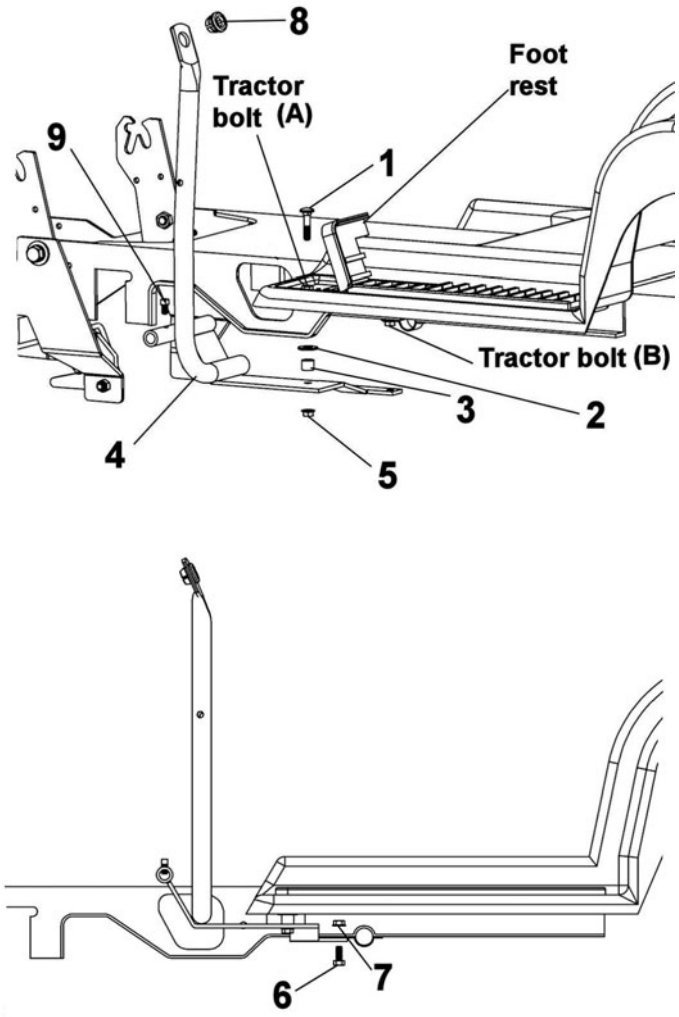
ASSEMBLY

For the 42'' mower deck only: Remove the mower deck stopper and keep in safe place.

NOTE: Remove tractor bolt (A) from under the foot rest pad as shown.
Remove tractor bolt (B) from underneath the foot rest. Keep the bolts in a safe place for future installation.
Install handle support (item 4).

Item #	Description	Action
1	Carriage bolt 5/16''n.c. x 1 1/2''	Insert as shown.
2	Flat washer	Install as shown on bolt.
3	Sleeve	Insert on the bolt as shown. *
4	Handle support	Insert on the bolt as shown
5	Flange nut 5/16'' n.c.	Do not tighten.
6	Carriage bolt 5/16'' n.c. x 3/4''	Insert as shown.
7	Flange nut 5/16'' n.c	Tighten firmly.
8	Plastic grommet	Insert as shown.
9	Square head set screw 5/16'' n.c. x 1/2''	Insert as shown.

NOTE: Tighten firmly all the nuts. Put the pad of the foot rest in place.
* Do not use if there is a rubber bushing.

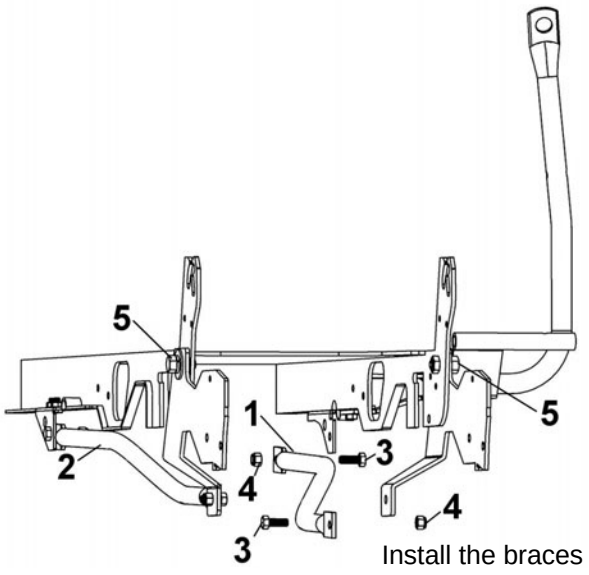


Install handle support

Install the left & right braces (items 1 & 2) on each side of the vehicle.

Item #	Description	Action
1 & 2	Left & right brace (qty 2)	Install on the inside as shown.
3	Hex bolt 3/8'' n.c. x 1'' (qty 4)	Insert the bolts as shown (one inside the other outside).
4	Nylon insert lock nut 3/8'' (qty 4)	Insert on the bolts as shown. Tighten firmly.

NOTE: Tighten firmly the hex. bolts (item 5) on both sides.

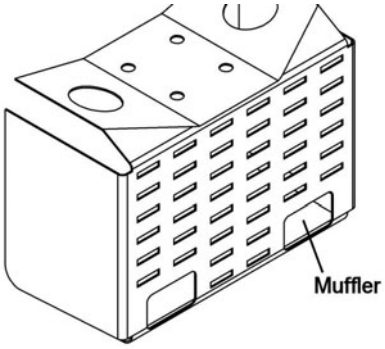


Install the braces

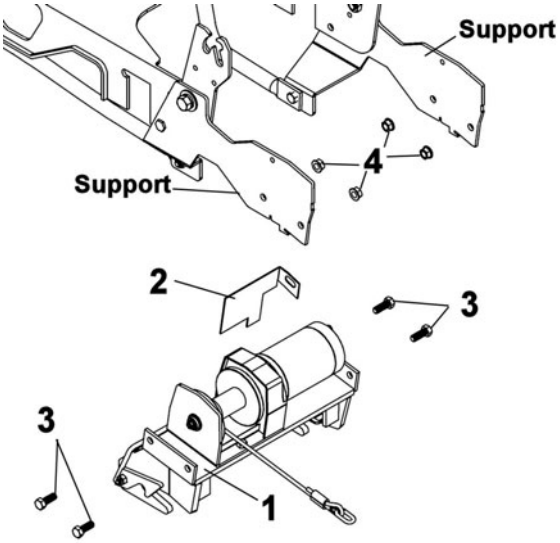
ASSEMBLY

NOTE 2: If your tractor has the muffler coming out the front as shown in the drawing, please install the heat shield as shown below.

If the muffler come out in another position, you do not need the heat shield.

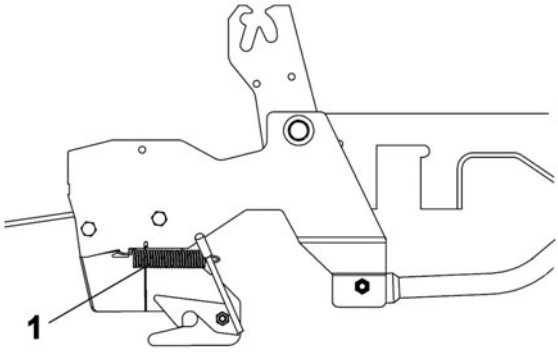


Install the female hitch (item 1)		
# Item	Description	Action
1	Female hitch	Install between the two supports.
2	Heat shield	Install the heat shield inside the female hitch.*
3	Hex bolt 3/8 x 1'' (qty 4)	Insert as shown.
4	Flange nut 3/8'' (qty 4)	Tighten all the nuts firmly.
* See **NOTE 2** at top of page		



Install the female hitch between the two supports

Install the spring (item 1)		
# Item	Description	Action
1	Spring	Install the spring on the frame as shown.
NOTE: The latch must move freely.		



Install the spring as shown

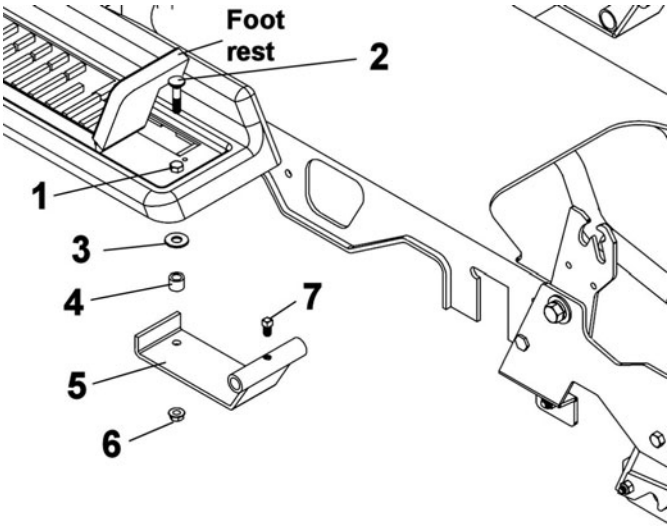
ASSEMBLY

NOTE: Lift the front part of foot rest to remove tractor bolt (item 1). Install the cab support (item 5).

# Item	Description	Action
1	Tractor bolt	Remove from tractor.
2	Carriage bolt 5/16''n.c. x 1 1/2''	Insert as shown.
3	Flat washer	Install as shown on bolt.
4	Sleeve	Insert on the bolt as shown.*
5	Cab support	Insert on the bolt as shown.
6	Flange nut 5/16'' n.c.	Tighten.
7	Square head set screw 5/16 x 1/2''	Insert in the hole of the cab support.

NOTE: Keep the tractor bolt in a safe place for future installation.

* Do not use if there is a rubber bushing.

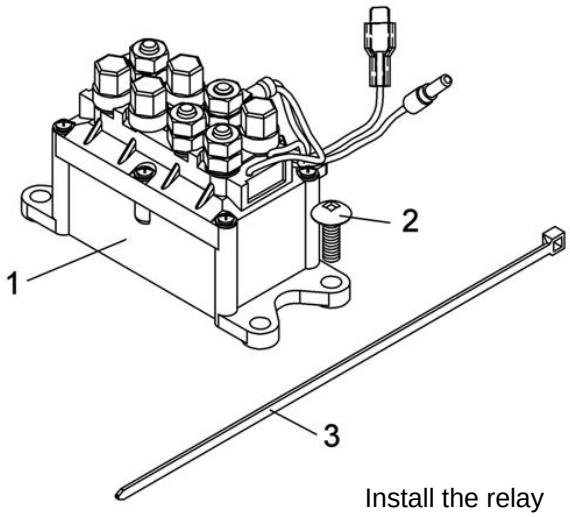


Install the cab support

ASSEMBLY

STEP 2:
INSTALLATION OF THE WINCH CONTROL SWITCH

Install the relay (item 1).		
# Item	Description	Action
1	Relay	Install in an appropriate area.
2	Metal screw #12 x 3/4'' (qty 4)	Secure relay in place.
*3	Nylon tie wrap 8'' (qty 4)	See *
*If necessary use the nylon tie wraps to secure the relay in place. ** Install in a sheltered place away from bad weather.		

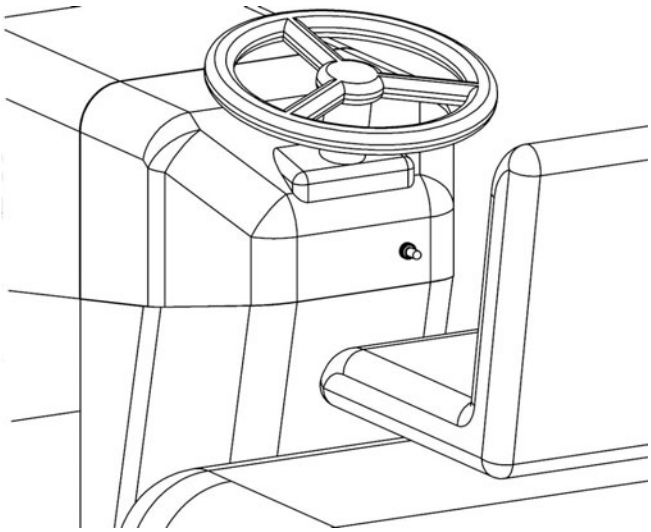


Install the relay

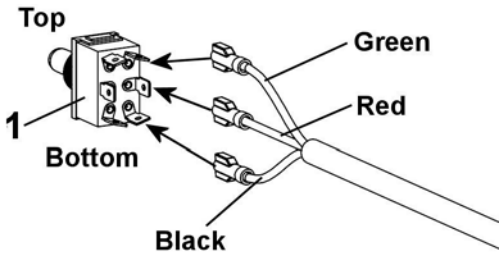
Before drilling the hole, check behind the dashboard to make sure there is enough space to install the switch.
Drill a 1/2'' hole in the dashboard or an appropriate place (see reference drawing). Stick the UP/DOWN decal over the hole for the switch.

Insert the switch in the hole and secure in place with the rubber boot.

NOTE: It is important to install the switch vertically. Connect the wires as shown.
When the switch is raised, the winch must lift the accessory. If you prefer the contrary, invert the green and black wires.


Install the winch control switch

Up / Down decal



Connect the wires

IMPORTANT
To prolong the winch cable's life, release the winch control switch as soon as the accessory touches the ground. This will keep the cable from tangling up which causes premature wear.

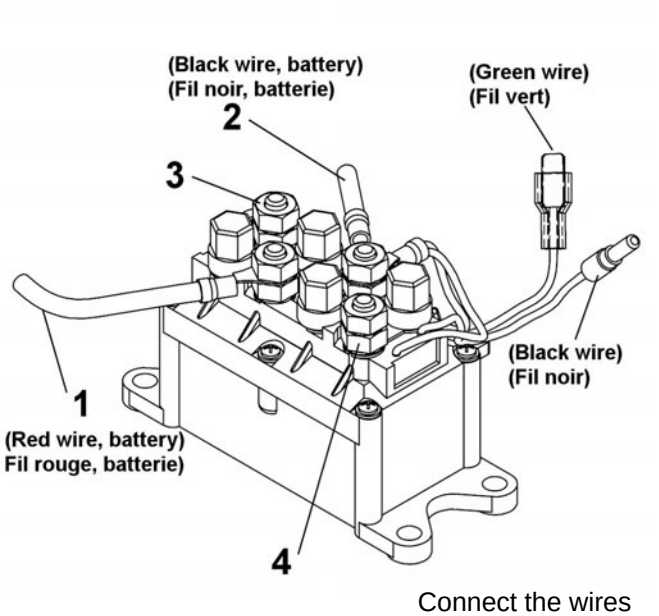
ASSEMBLY

CONNECTING THE WIRES

NOTE: The posts on the relay are identified by numbers. (1-2-3-4).

Install the wires from the winch on the posts of the relay.
Red wire (+) on post #3.
Black wire (-) on post #4.

Connect the red wire from the winch (limit switch) with the green wire from the relay.



Connect the wires

IDENTIFY THE IGNITION WIRE:

Place the clip of the Hi / Low tester on the negative post (-) on the battery or a metal surface without any paint.

Turn the ignition key to the position: Accessory.

Insert the tip of the tester in a hole at the back of the starter (switch) make sure to touch the metal part of the wire (on most tractors, it is the A1 terminal on the ignition switch that is used for accessories. Before connection, verify with HI/LOW tester).

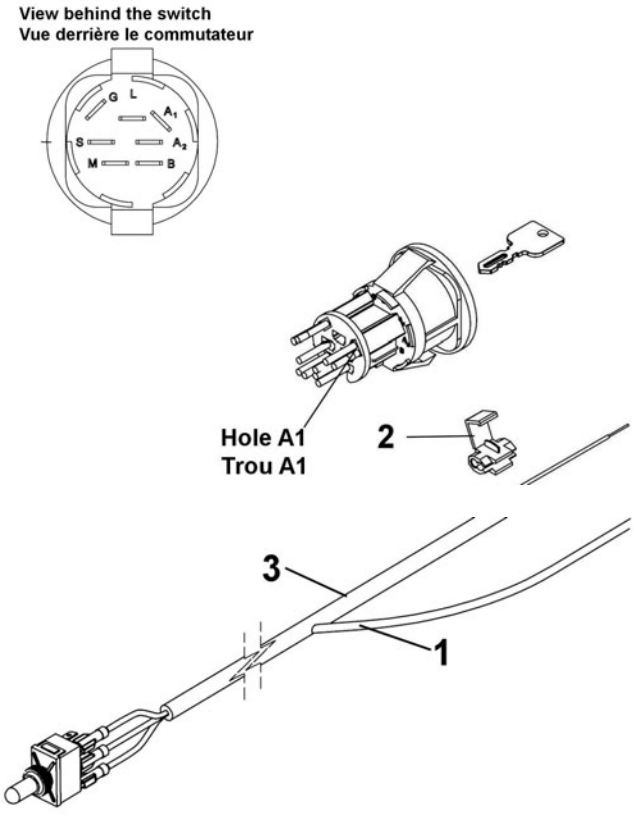
If the tester's light turns on, turn the ignition key to the position, Off. The light must turn off.
You have identified the ignition wire, if not repeat the operation on another wire.

INSTALL THE CONTROL WIRE:

Join the ignition wire and the red wire from the winch control (item 1) with the instant connector (item 2).

Connect the black wire of the winch control (item 3) to the black wire on the relay.

Connect the green wire of the winch control (item 3) with the red wire of the winch (limit switch).



Connect the ignition wire

ASSEMBLY

CAUTION

FOR YOUR SECURITY:
Read and follow the safety precautions for the battery in the vehicle's manual.

CONNECT THE WIRES ON THE BATTERY:

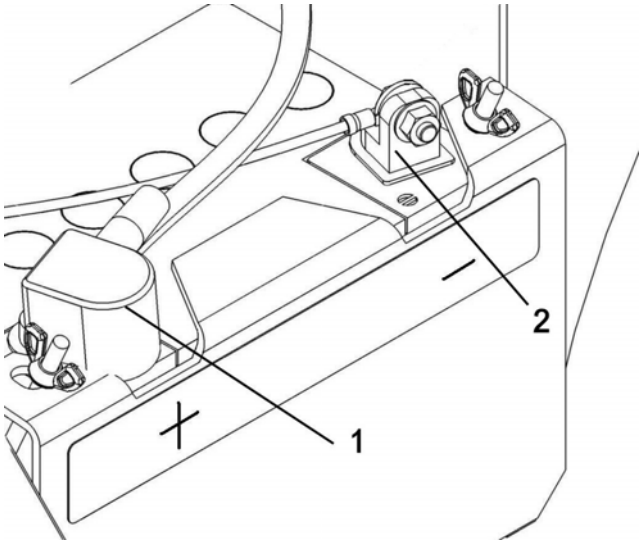
Connect the wires from the relay to the vehicle's battery.
The red wire (+) on the positive post of the battery (item 1).
The black wire (-) on the negative post of the battery (item 2).

Make sure to tighten the nuts on the posts.

TIE ALL THE WIRES:

NOTE: Make sure the wires from the control assembly do not interfere with anything on the tractor nor come into contact with any heating, electrical or removable elements of the tractor.

Tie the wires with four nylon tie wraps included in the kit.

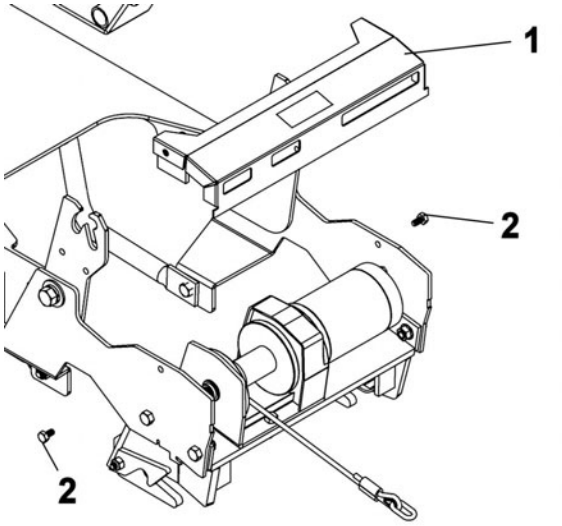


Connect the relay wires to the battery

Install the heat shield (item 1).		
# Item	Description	Action
1	Heat shield	Install as shown.
2	Hex bolts 1/4 x 1/2'' (qty 2)	Tighten firmly.

VERY IMPORTANT:
Make sure the cable winds up and unrolls as shown in the figure (cable under the spool).

If the winch cable does not wind up from the bottom of spool as shown, the limit switch will not work and may cause damage to the subframe, winch and accessory.



Install the heat shield

ASSEMBLY

STEP 3:
DRIVE MECHANISM INSTALLATION:

NOTE: You must remove mower deck to install the drive mechanism.

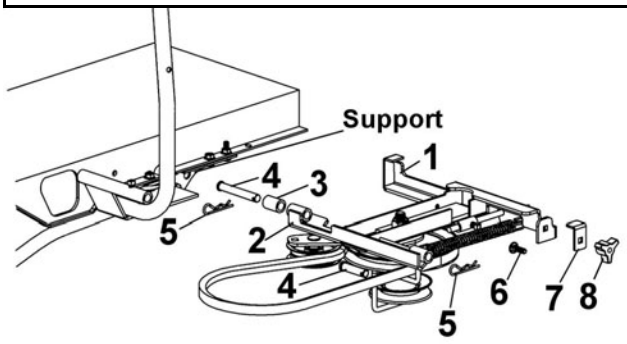
Install the drive mechanism (item 1).		
# Item	Description	Action
1	Back of drive mechanism	Hook on the tractor frame, right side.
2	Front of drive mechanism	Install between the supports.
4	Pin (qty 2)	Insert as shown. On the right side, pin and sleeve (item 3) from the outside. On the left side, and pin from the inside.
5	Hair pin (qty 2)	Secure the pins.
6	Carriage bolt 5/16'' x 1''	Insert in the back of the drive as shown.
7	Bracket	Install on the bolt as shown and on the tractor frame.
8	Knob	Tighten to lock the drive frame in place.

WARNING

TO PREVENT INJURIES:
Stop the motor.
Apply parking brake.
Remove the ignition key.
Disconnect the wire from the spark plug(s) and keep away from spark plug(s) to prevent accidental starting.

WARNING

TO PREVENT INJURIES:
It is the person who installs the drive mechanism responsibility to make sure that when the clutch is disengaged that all moving parts stop.
For more information, do not hesitate to contact the technical support.

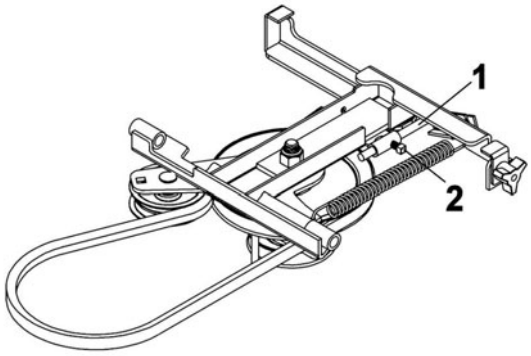


Install drive mechanism

For tractors with Electric Clutch:
Install the belt on the engine pulley of the vehicle.

Check the tension on the spring.

If necessary, adjust the tension by moving the adjustment rod (item 1) and tighten the set screw (item 2).

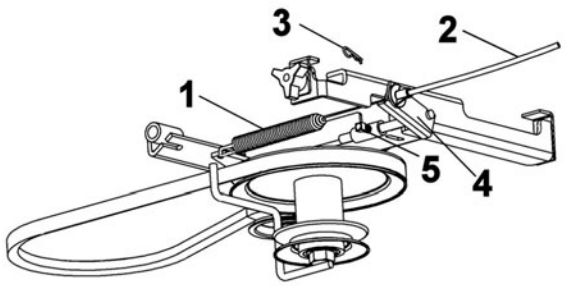


No modifications to be done

ASSEMBLY

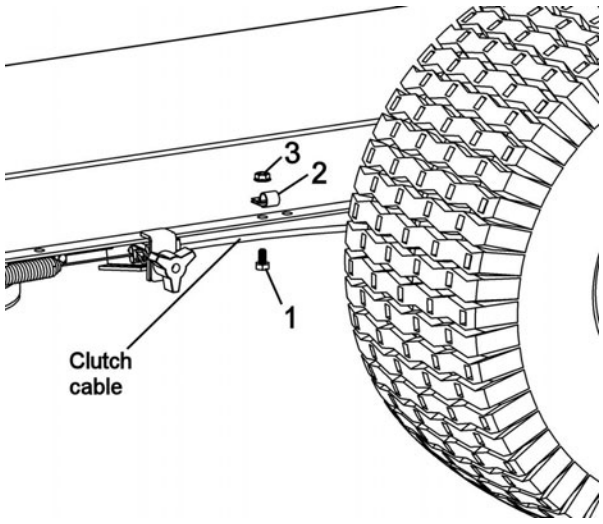
For tractors with Manual Clutch activated by a cable:

Install the tractor's manual clutch cable . * Remove the spring.		
# Item	Description	Action
1	Spring from the clutch cable	Install as shown in the hole on the tension pulley.
2	Clutch cable	Insert in the slot on the adjustment rod.
3	Hair pin 2mm	Secure the cable.
4	Adjustment rod	Slide towards the back to apply enough tension on the spring.
5	Square head set screw 5/16 x 1/2''	Secure the adjustment rod.
Install the belt on the engine pulley of the vehicle. Check the tension on the spring. If necessary, adjust the tension by moving the adjustment rod and tighten the set screw.		



Install the manual clutch cable

Install the cable clip (item 2).		
# Item	Description	Action
1	Hex bolt. 1/4 x 1/2''	Install as shown (choose a hole)
2	Cable clip	Insert the cable in the clip and insert on bolt as shown.
3	Flange nut 1/4''	Tighten firmly.



Secure clutch cable

ASSEMBLY

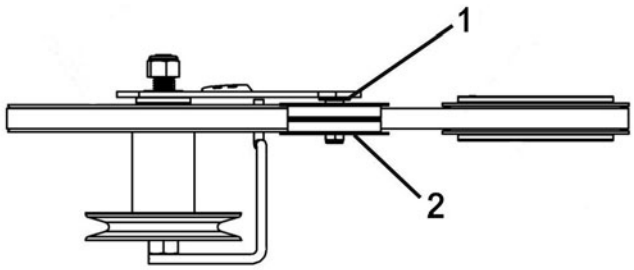
VERIFICATION OF THE BELT AND PULLEY ALIGNMENT:

WARNING

TO PREVENT INJURIES:
do this verification when the engine of the vehicle is not running.

If applicable, you can remove or add a flat washer (item 1) on the tension pulley (item 2) for a better adjustment.

Engage and disengage the clutch a few times and make sure the belt does not touch the belt guide in any place when the drive mechanism is engaged.



Adjust the pulleys

WARNING

TO PREVENT INJURIES:
It is the person who installs the drive mechanism responsibility to make sure that when the clutch is disengaged that all moving parts stop.

For more information, do not hesitate to contact the technical support.

OPERATION & MAINTENANCE

CAUTION

Read the vehicle Owner's Manual carefully. Be thoroughly familiar with the controls & proper use of the attachment. Know how to stop the attachment quickly.

IMPORTANT:
THE WINCH KIT IS TO BE USED ONLY TO LIFT BERCO ACCESSORIES, ANY OTHER USE MAY CAUSE DAMAGE TO THE VEHICLE.

CONTROLS

IMPORTANT:
In order to avoid draining the battery of the vehicle, always start the engine before using the winch.

THE WINCH CONTROL SWITCH

Push up or down the winch control switch to lift or lower the accessory to the ground.
There is a limit switch stopper that limits the lifting.
Always prestretch cable and respool under load before installing the hook on the accessory. A tightly wound cable reduces chances of binding, which can cause damage to the cable.
To prolong the winch cable's life, release the winch control switch as soon as the accessory touches the ground. This will keep the cable from tangling up, causing premature wear of the cable.

WINCH CABLE MAINTENANCE

To reduce the risk of cable failure during the season, we recommend changing the winch cable every year. Install the new winch cable as shown in figure in the parts breakdown.

MAINTENANCE

a) Check mounting bolts at frequent intervals for proper tightness to be sure equipment is in safe working condition.
b) Apply oil at all pivot points.
c) To prolong the life span of the winch, make sure the snap mount switch works well.

BELT REPLACEMENT

Belt for the accessories:

SEE ATTACHMENT OWNER'S MANUAL (SNOWBLOWER AND BROOM) FOR REPLACING INSTRUCTIONS.

Drive Mechanism Belt:

a) Dismount the drive mechanism.
b) Remove the bolt which retains the tension pulley.
c) Replace the belt and re-install the tension pulley. Before tightening make sure the belt guide does not touch the belt at any time.
d) Re-install the drive mechanism.
e) Check the alignment of the belt that joins the drive mechanism to the engine pulley.

VERIFY TIRE PRESSURE:

Tire pressure must be even on both sides of the tractor according to the vehicle's owner's manual.

DISMOUNTING & STORAGE

DISMOUNTING

SEE ATTACHMENT OWNER'S MANUAL (SNOWBLOWER, BROOM AND BLADE) FOR DISMOUNTING INSTRUCTIONS.

a) Dismount the attachment.
b) Remove the rear counterweight when you remove the front attachment (if applicable).
c) Remove the belt from the engine pulley.
d) Dismount the drive mechanism by supporting it in your hand. Carefully lower to the ground.
   Manual clutch activated by cable:
   Unhook cable shield by removing the hair pin. Unhook spring. Pull out drive mechanism from underneath tractor.
e) You may leave the subframe on tractor all year long or remove it if preferred.
f) Reinstall mower if needed.

STORAGE

a) Clean and paint all parts from which paint has worn.
b) Apply oil at all pivot points.
c) Inspect and replace all defective parts before using again.

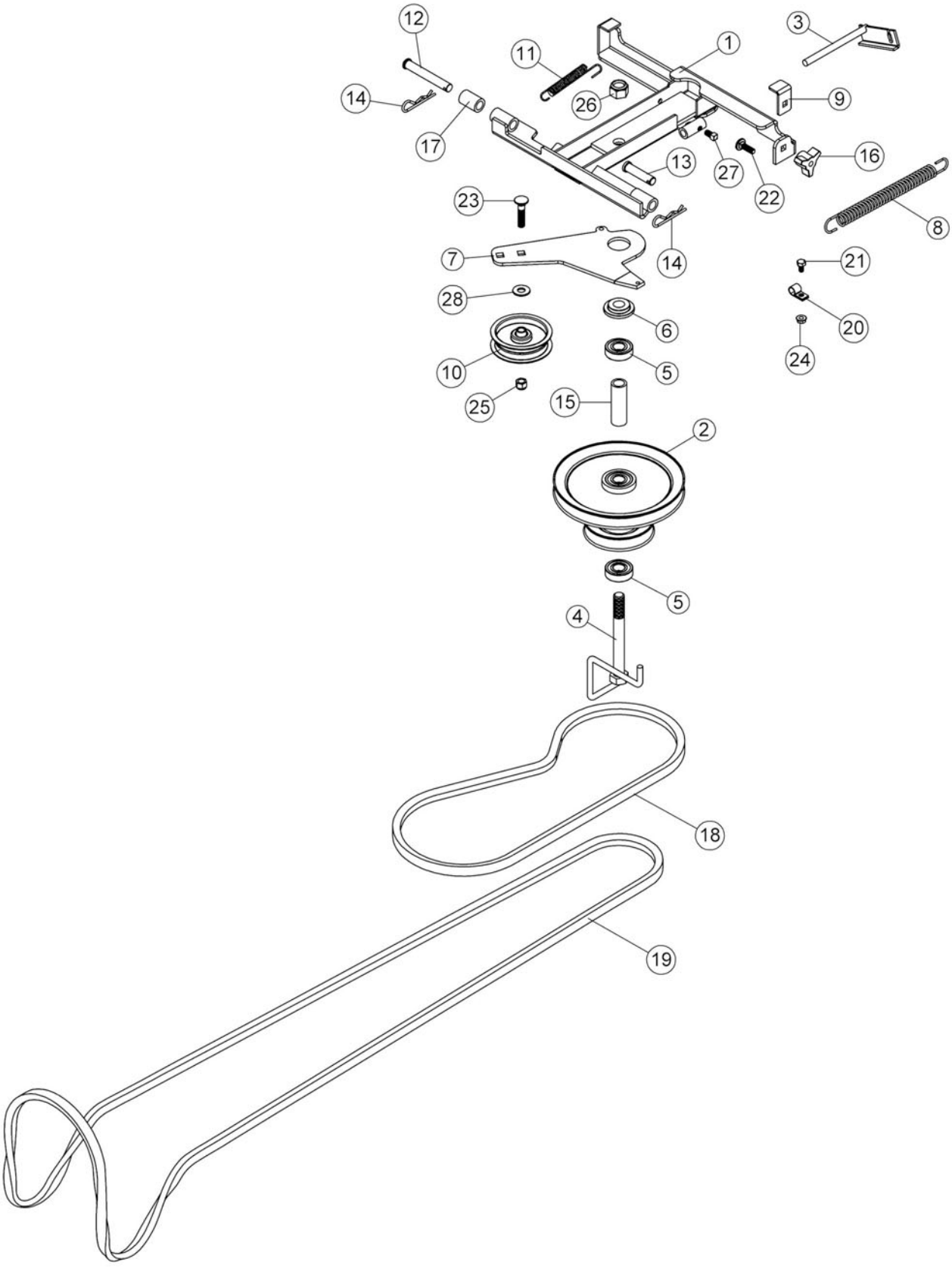
TROUBLESHOOTING

*** Please refer to parts breakdown section for parts identification**.

PROBLEM	POSSIBLE CAUSES	CORRECTIVE ACTION
Winch runs backwards.	Winch wires reversed.	Recheck wiring.
	Switch wires reversed.	Recheck wiring.
	Switch installed incorrectly.	Check switch installation.
	Battery wires reversed.	Recheck wiring.
	Winch cable is not winded up from the bottom of spool.	Wind winch cable from underneath.
Winch will not operate or runs in one direction only.	Vehicle's ignition switch is at OFF position.	Turn vehicle's ignition switch at ON position.
	Broken wires or bad connection.	Check for poor connections.
	Control switch is inoperative.	Replace control switch.
	Relay or breaker is damaged.	Replace the relay or breaker.
	Limit switch is damaged.	Replace limit switch.
	Winch is damaged.	Replace or repair winch.
Winch runs but with insufficient power or line speed.	Weak battery.	Recharge or replace battery. Check charging system
	Poor battery connection.	Check battery terminals for corrosion. Clean when required.
	Winch is damaged.	Replace or repair winch.

HOW TO KNOW	POINTS TO CHECK
Poor connections.	Recheck wiring with the owner's manual
HI/LOW voltage tester does not work.	Connect it on battery posts (+ and -) of a functional battery. If there is no light, the tester is damaged.
The control switch inoperative.	Test both connectors with HI/LOW voltage tester. If light comes ON in both positions (IN & OUT), the switch is operative.
Relay is damaged	When it is working, there is a "CLICK" sound when the control switch is activated. Check connections with HI/LOW voltage tester.
Winch is damaged	The ultimate test is to connect the winch directly to the battery and reverse the wires to test both directions. If the winch doesn't work, it is damaged.
The limit switch is damaged.	When the limit switch is pushed or stuck inside, the winch can't raise the accessory, only lower it. If not replace it.
The breaker is damaged.	Check the voltage on both terminals on the breaker with the HI / LOW voltage tester. If not replace.

PARTS BREAKDOWN
COMPACT DRIVE MECHANISM 700528-1

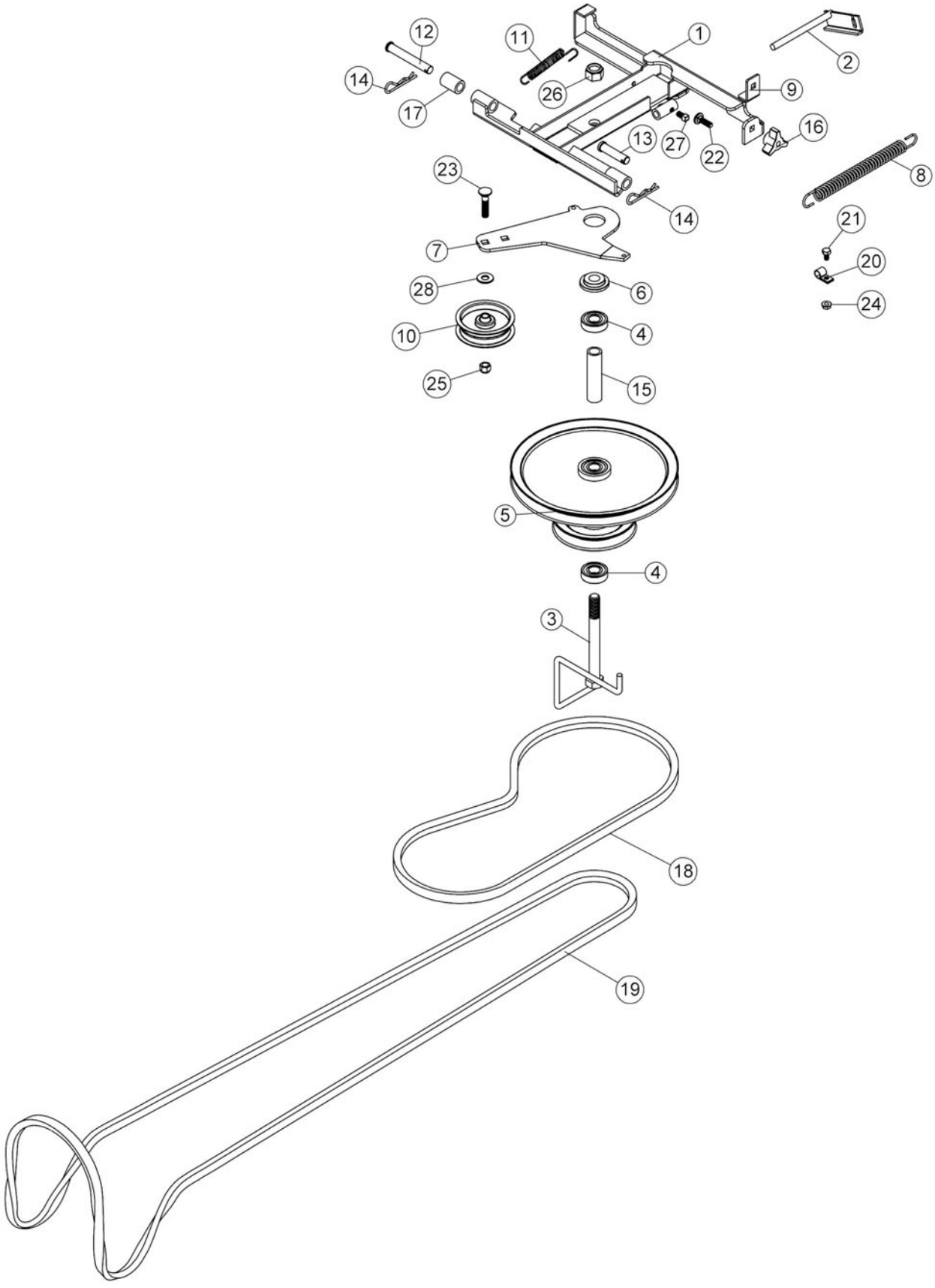


PARTS LIST
COMPACT DRIVE MECHANISM 700528-1

Ref. Réf.	English description	Description française	Qty. Qté.	Part # Pièce #
1	Drive frame	Châssis d'entraînement	1	105505
2	Double pulley inc. 102736 & 102782	Poulie double inc. 102736 & 102782	1	102692
3	Adjustment rod	Tige d'ajustement	1	104841
4	Belt guide	Guide-courroie	1	104095
5	Ball bearing	Roulement à billes	2	102736
6	Flange washer	Rondelle à bride	1	102969
7	Idler arm	Bras de tension	1	104845
8	Spring	Ressort	1	102304
9	Bracket	Fixation	1	105184
10	Flat pulley	Poulie plate	1	102839
11	Spring 1/2"	Ressort 1/2"	1	102003
12	Pin	Goupille	1	104337
13	Pin	Goupille	1	103234
14	Hair pin 3mm	Goupille à ressort 3mm	2	102617
15	Sleeve	Douille	1	102782
16	Knob	Bouton	1	103027
17	Sleeve	Douille	1	105839
18	V-Belt , A-50	Courroie en V , A-50	1	104104
19	V-Belt , B-124	Courroie en V , B-124	1	102484
20	Cable clip	Attache-câble	1	104381
21	Hex. bolt 1/4" n.c. x 1/2"	Boulon hex. 1/4" n.c. x 1/2"	1	O/L
22	Carriage bolt 5/16" n.c. x 1"	Boulon à carrosserie 5/16" n.c. x 1"	1	O/L
23	Carriage bolt 3/8" n.c. x 1 3/4"	Boulon à carrosserie 3/8" n.c. x 1 3/4"	1	O/L
24	Flange nut 1/4" n.c.	Écrou à bride 1/4" n.c.	1	O/L
25	Nylon insert lock nut 3/8" n.c.	Écrou à garniture de nylon 3/8" n.c.	1	O/L
26	Nylon insert lock nut 5/8" n.c.	Écrou à garniture de nylon 5/8" n.c.	1	O/L
27	Square head set screw 5/16" n.c. x 1/2"	Vis à pression à tête carrée 5/16" n.c. x 1/2"	1	O/L
28	Flat washer 7/16" hole	Rondelle plate 7/16" trou	1	O/L

O/L = Obtain Locally

PARTS BREAKDOWN
NORTHEAST DRIVE MECHANISM 700529-1

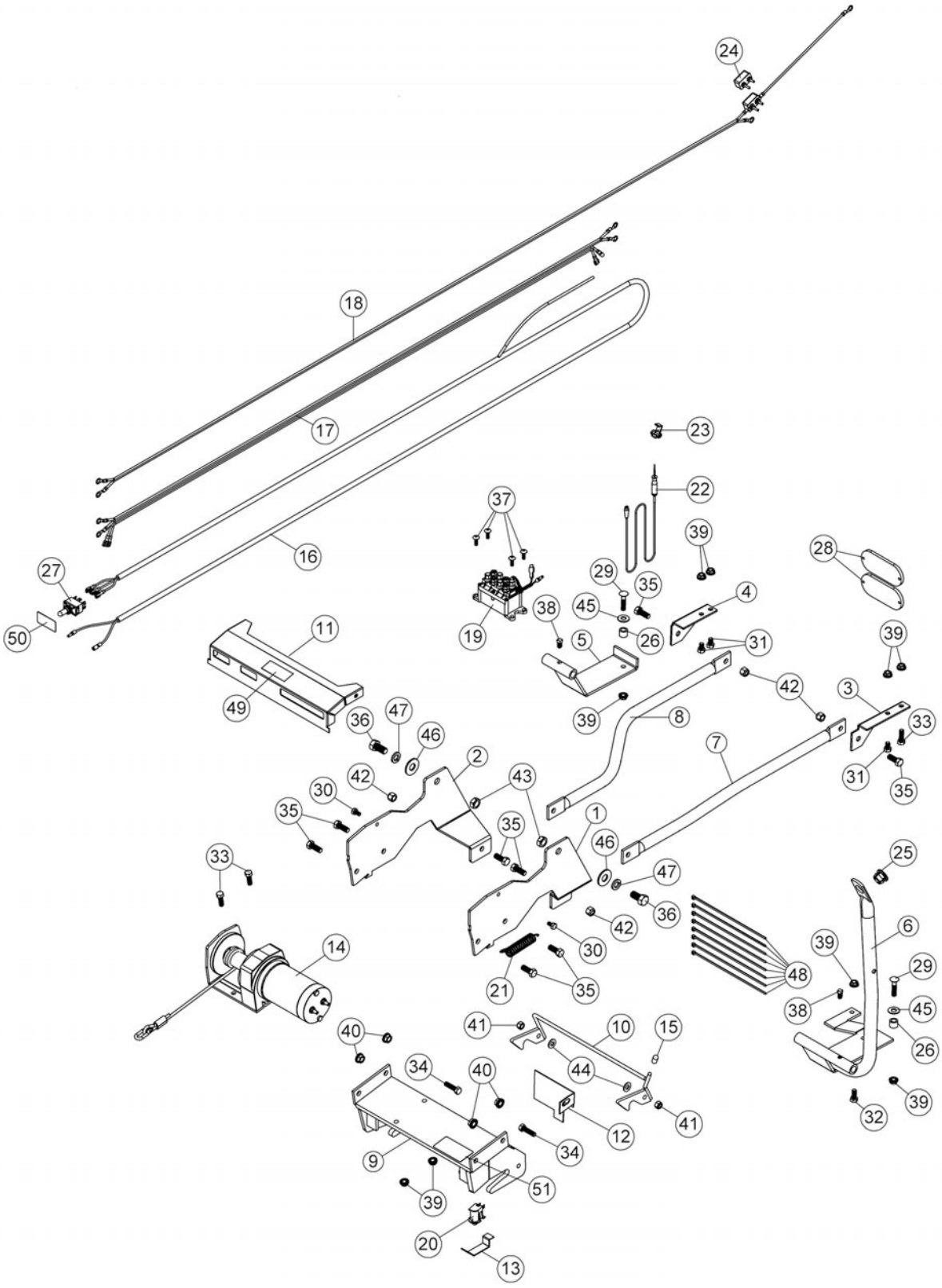


PARTS LIST
NORTHEAST DRIVE MECHANISM 700529-1

Ref. Réf.	English description	Description française	Qty. Qté.	Part # Pièce #
1	Drive frame	Châssis d'entraînement	1	105505
2	Adjustment rod	Tige d'ajustement	1	104841
3	Belt guide	Guide-courroie	1	104043
4	Ball bearing	Roulement à billes	2	102736
5	Double pulley inc. 102736 & 103035	Poulie double inc. 102736 & 103035	1	103040
6	Flange washer	Rondelle à bride	1	102969
7	Idler arm	Bras de tension	1	104845
8	Spring	Ressort	1	102304
9	Bracket	Fixation	1	105184
10	Flat pulley	Poulie plate	1	102839
11	Spring 1/2"	Ressort 1/2"	1	102003
12	Pin	Goupille	1	104337
13	Pin	Goupille	1	103234
14	Hair pin 3mm	Goupille à ressort 3mm	2	102617
15	Sleeve	Douille	1	103035
16	Knob	Bouton	1	103027
17	Sleeve	Douille	1	105839
18	V-Belt , A-54	Courroie en V , A-54	1	105186
19	V-Belt , B-130	Courroie en V , B-130	1	104887
20	Cable clip	Attache-câble	1	104381
21	Hex. bolt 1/4" n.c. x 1/2"	Boulon hex. 1/4" n.c. x 1/2"	1	O/L
22	Carriage bolt 5/16" n.c. x 1"	Boulon à carrosserie 5/16" n.c. x 1"	1	O/L
23	Carriage bolt 3/8" n.c. x 1 3/4"	Boulon à carrosserie 3/8" n.c. x 1 3/4"	1	O/L
24	Flange nut 1/4" n.c.	Écrou à bride 1/4" n.c.	1	O/L
25	Nylon insert lock nut 3/8" n.c.	Écrou à garniture de nylon 3/8" n.c.	1	O/L
26	Nylon insert lock nut 5/8" n.c.	Écrou à garniture de nylon 5/8" n.c.	1	O/L
27	Square head set screw 5/16" n.c. x 1/2"	Vis à pression à tête carrée 5/16" n.c. x 1/2"	1	O/L
28	Flat washer 7/16" hole	Rondelle plate 7/16" trou	1	O/L

O/L = Obtain Locally

PARTS BREAKDOWN
SUBFRAME 700527-2



PARTS LIST
SUBFRAME 700527-2

Ref. Réf.	English description	Description française	Qty. Qté.	Part # Pièce #
1	Left support	Support gauche	1	105511
2	Right support	Support droit	1	105512
3	Left support	Support gauche	1	105837
4	Right support	Support droit	1	105838
5	Cab support	Support de cabine	1	105508
6	Handle support	Support de manivelle	1	105509
7	Left brace	Renfort gauche	1	105510
8	Right brace	Renfort droit	1	105532
9	Female hitch	Attache femelle	1	104817
10	Latch	Loquet	1	104818
11	Heat shield	Pare-chaleur	1	104824
12	Heat shield	Pare-chaleur	1	105228
13	Push plate	Plaque de poussée	1	105150
14	Winch assembly	Treuil assemblé	1	106125
15	Handgrip	Poignée	1	104825
16	Winch control wire	Fil du contrôle du treuil	1	106103
17	Wire assembly	Fil assemblé	1	105256
18	Wire assembly	Fil assemblé	1	104831
19	Relay	Relais	1	105257
20	Limit switch	Commutateur de fin de course	1	105136
21	Spring	Ressort	1	103566
22	Hi/low voltage tester	Testeur de haute/basse tension	1	105151
23	Instant connector	Connecteur instantané	1	105152
24	Breaker	Disjoncteur	1	105219
25	Plastic grommet	Oeillet de plastique	1	102063
26	Sleeve	Douille	2	102326

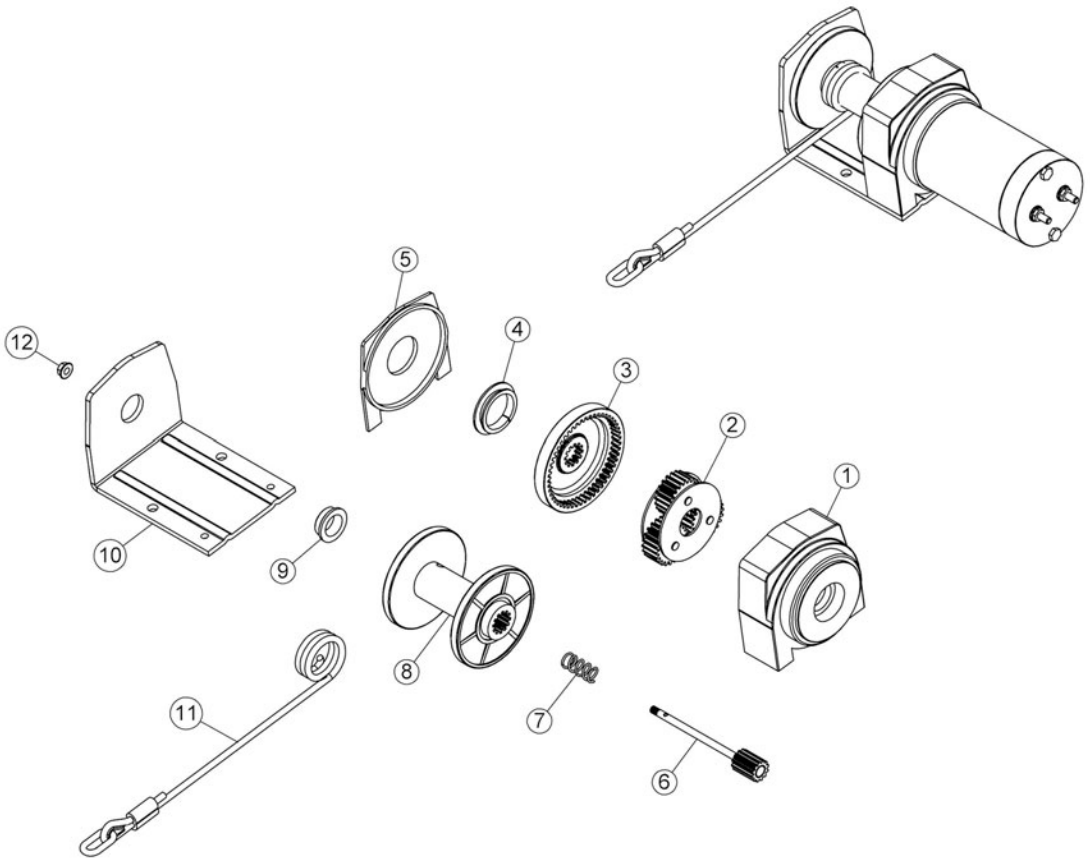
O/L = Obtain Locally

PARTS LIST
SUBFRAME 700527-2

Ref. Réf.	English description	Description française	Qty. Qté.	Part # Pièce #
27	Winch control switch	Commutateur de contrôle du treuil	1	106090
28	Reflector (Pack of 2)	Réflecteur (Ensemble de 2)	1	106108
29	Carriage bolt 5/16" n.c. x 1 1/2" GR5	Boulon à carrosserie 5/16" n.c. x 1 1/2" GR5	2	O/L
30	Hex. bolt 1/4" n.c. x 1/2" GR5	Boulon hex. 1/4" n.c. x 1/2" GR5	2	O/L
31	Hex. bolt 5/16" n.c. x 1/2" GR5	Boulon hex. 5/16" n.c. x 1/2" GR5	3	O/L
32	Hex. bolt 5/16" n.c. x 3/4" GR5	Boulon hex. 5/16" n.c. x 3/4" GR5	1	O/L
33	Hex. bolt 5/16" n.c. x 1" GR5	Boulon hex. 5/16" n.c. x 1" GR5	3	O/L
34	Hex. bolt 5/16" n.c. x 1 1/4" GR5	Boulon hex. 5/16" n.c. x 1 1/4" GR5	2	O/L
35	Hex. bolt 3/8" n.c. x 1" GR5	Boulon hex. 3/8" n.c. x 1" GR5	8	O/L
36	Hex. bolt 1/2" n.c. x 1" GR5	Boulon hex. 1/2" n.c. x 1" GR5	2	O/L
37	Metal screw T.H. #12" x 3/4"	Vis à métal T.H. #12" x 3/4"	4	O/L
38	Square head set screw 5/16" x 1/2"	Vis à pression à tête carré 5/16" x 1/2"	2	O/L
39	Flange nut 5/16" n.c.	Écrou à bride 5/16" n.c.	9	O/L
40	Flange nut 3/8" n.c.	Écrou à bride 3/8" n.c.	4	O/L
41	Nylon Insert lock Nut 5/16" n.c.	Écrou à garniture de nylon 5/16" n.c.	2	O/L
42	Nylon Insert lock Nut 3/8" n.c.	Écrou à garniture de nylon 3/8" n.c.	4	O/L
43	Hex. nut 1/2" n.c. (thin)	Écrou hex. 1/2" n.c. (mince)	2	O/L
44	Flat washer 5/16" hole	Rondelle plate 5/16" trou	2	O/L
45	Flat washer 3/8" hole	Rondelle plate 3/8" trou	2	O/L
46	Flat washer 9/16" hole	Rondelle plate 9/16" trou	2	O/L
47	Lock washer 1/2"	Rondelle de blocage 1/2"	2	O/L
48	Tie wrap 8"	Attache de nylon 8"	8	O/L
49	Decal caution hot surfaces	Décalque attention surfaces chaudes	1	105133
50	Lift decal	Décalque de relevage	1	106124
51	Model number	Numéro de modèle	1	REF

O/L = Obtain Locally

PARTS BREAKDOWN
WINCH 106125



PARTS LIST
WINCH 106125

Ref. Réf.	English description	Description française	Qty. Qté.	Part # Pièce #
1	Reduction box	Boîte de réduction	1	105237
2	Planetary gear	Engrenage planétaire	1	105241
3	Inner gear	Engrenage intérieur	1	105239
4	Drum support bushing	Coussinet du support de tambour	1	105242
5	Drum support plate	Plaque de support du tambour	1	105243
6	Spline shaft	Arbre à cannelures	1	105246
7	Spring	Ressort	1	105245
8	Drum	Tambour	1	105238
9	Bushing	Coussinet	1	105240
10	Base plate assembly	Plaque de base assemblée	1	105244
11	Winch cable	Cable du treuil	1	106089
12	Flange nut M6 x 1.00	Écrou à bride M6 x 1.00	1	O/L

O/L = Obtain Locally

TORQUE SPECIFICATION TABLE

GENERAL TORQUE SPECIFICATION TABLE
USE THE FOLLOWING TORQUES WHEN SPECIAL TORQUES ARE NOT GIVEN

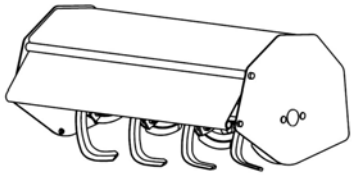
NOTE: These values apply to fasteners as received from supplier, dry or when lubricated with normal oil. They do not apply if special graphited or moly disulphide greases or other extreme pressure lubricants are used. This applies to both UNF and UNC threads.

*** Thick nuts must be used with grade 8 bolts**

SEE Grade No.		2				5				8 *			
BOLT HEAD IDENTIFICATION MARKS AS PER GRADE NOTE MANUFACTURING MARKS WILL VARY		TORQUE				TORQUE				TORQUE			
BOLT SIZE		FOOT POUNDS		NEWTON-METERS		FOOT POUNDS		NEWTON-METERS		FOOT POUNDS		NEWTON-METERS	
Inches	Millimetre	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
1/4"	6.35	5	6	6.8	8.13	9	11	12.2	14.9	12	15	16.3	30.3
5/16"	7.94	10	12	13.6	16.3	17	20.5	23.1	27.8	24	29	32.5	39.3
3/8"	9.53	20	23	27.1	31.2	35	42	47.5	57	45	54	61	73.2
7/16"	11.11	30	35	40.7	47.4	54	64	73.2	86.8	70	84	94.9	113.9
1/2"	12.7	45	52	61	70.5	80	96	108.5	130.2	110	132	149.2	179
9/16"	14.29	65	75	88.1	101.6	110	132	149.2	179	160	192	217	260.4
5/8"	15.88	95	105	128.7	142.3	150	180	203.4	244.1	220	264	298.3	358
3/4"	19.05	150	185	203.3	250.7	270	324	366.1	439.3	380	456	515.3	618.3
7/8"	22.23	160	200	216.8	271	400	480	542.4	650.9	600	720	813.6	976.3
1"	25.4	250	300	338.8	406.5	580	696	786.5	943.8	900	1080	1220.4	1464.5

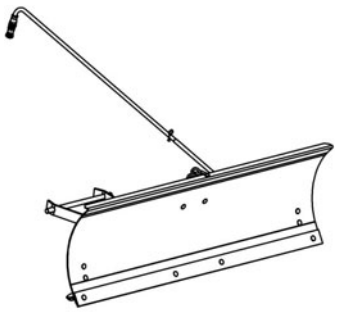
METRIC BOLT TORQUE SPECIFICATIONS							
		COARSE THREAD			FINE THREAD		
Size Screw	Grade No.	Pitch (mm)	Foot Pounds	Newton-Meters	Pitch (mm)	Foot Pounds	Newton-Meters
M6	4T	1.00	3.6 - 5.8	4.9 - 7.9	-	-	-
	7T		5.8 - 9.4	7.9 - 12.7		-	-
	8T		7.2 - 10	9.8 - 13.6		-	-
M8	4T	1.25	7.2 - 14	9.8 - 19	1.00	12 - 17	16.3 - 23
	7T		17 - 22	23 - 29.8		19 - 27	25.7 - 36.6
	8T		20 - 26	27.1 - 35.2		22 - 31	29.8 - 42
M10	4T	1.50	20 - 25	27.1 - 33.9	1.25	20 - 29	27.1 - 39.3
	7T		34 - 40	46.1 - 54.2		35 - 47	47.4 - 63.7
	8T		38 - 46	51.5 - 62.3		40 - 52	54.2 - 70.5
M12	4T	1.75	28 - 34	37.9 - 46.1	1.25	31 - 41	42 - 55.6
	7T		51 - 59	69.1 - 79.9		56 - 68	75.9 - 92.1
	8T		57 - 66	77.2 - 89.4		62 - 75	84 - 101.6
M14	4T	2.00	49 - 56	66.4 - 75.9	1.50	52 - 64	70.5 - 86.7
	7T		81 - 93	109.8 - 126		90 - 106	122 - 143.6
	8T		96 - 109	130.1 - 147.7		107 - 124	145 - 168
M16	4T	2.00	67 - 77	90.8 - 104.3	1.50	69 - 83	93.5 - 112.5
	7T		116 - 130	157.2 - 176.2		120 - 138	162.6 - 187
	8T		129 - 145	174.8 - 196.5		140 - 158	189.7 - 214.1
M18	4T	2.00	88 - 100	119.2 - 136	1.50	100 - 117	136 - 158.5
	7T		150 - 168	203.3 - 227.6		177 - 199	239.8 - 269.6
	8T		175 - 194	237.1 - 262.9		202 - 231	273.7 - 313
M20	4T	2.50	108 - 130	146.3 - 176.2	1.50	132 - 150	178.9 - 203.3
	7T		186 - 205	252 - 277.8		206 - 242	279.1 - 327.9
	8T		213 - 249	288.6 - 337.4		246 - 289	333.3 - 391.6

ATTACHMENTS



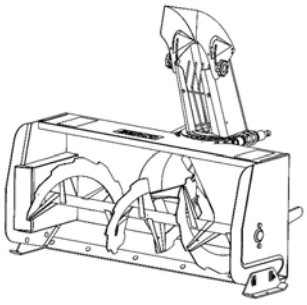
ROTARY TILLER #700312

Mounts to the rear of lawn, yard & garden tractors 14 to 25 HP. Comes complete with drive & manual lift mechanisms & mounting hardware

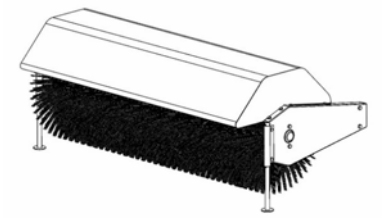


BLADE #700463

Mounts on the same subframe as the snowblower & rotary broom.

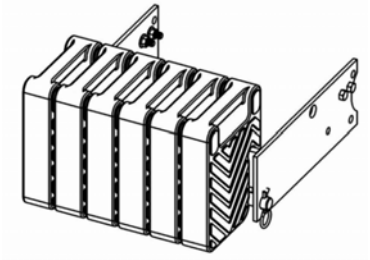


SOUFFLEUSE
700465 40"
700474 44"
700478 48"
Mounts on the same subframe as the blade & rotary broom.



ROTARY BROOM
#700380 with nylon brush
#700381 with polypropylene brush.

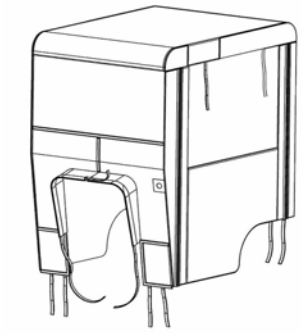
Fits on same subframe as snowblower & utility blade. Requires an adaptor.



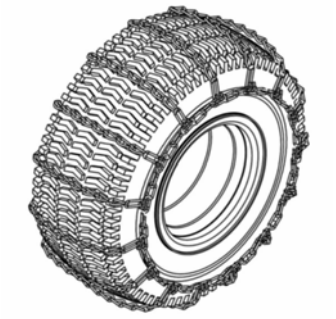
COUNTERWIEGHT

 # According to tractor model

Required for safety and traction. Counterbalances weight of attachment.

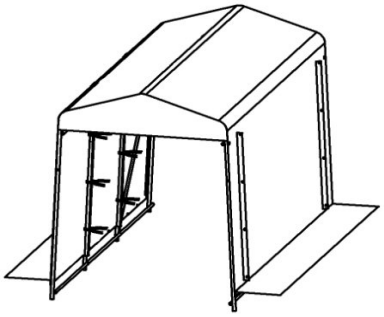


TRACTOR WINTER CAB
#700271 34"
#700423 40"
Universal type fits on a wide variety of lawn and garden tractors.



TIRE CHAINS

Two link spacing. Required for traction and safety.
Pkg. of 2



WINTER SHELTER #700438
Perfect to protect the tractors, A.T.Vs and snowmobiles from the weather.
Dimensions: 5'W x 12'L x 7' 8"H

NOTES

NOTES

WHEN PERFORMANCE & DEPENDABILITY ARE NON NEGOTIABLE !

Bercomac Limitée
92, Fortin North, Adstock, Quebec, Canada, G0N 1S0

WWW.BERCOMAC.COM

PRINTED IN CANADA

(ORIGINAL NOTICE)